

WHAT IS CLAIMED IS:

1. A method of learning valid security codes by a security code receiver, comprising steps of:
- 5 - receiving a first security code;
 - within a predetermined period of time receiving a second security code, having a predetermined relationship to the first security code; and
 - storing a representation of the second security code as a valid security code.
- 10 2. A method for automatically learning a rolling type access code from a learning transmitter by a barrier movement operator, comprising steps of:
- receiving a first rolling type access code from a first transmitter, the code having a fixed identification portion recognized by the operator;
- 15 - saving a representation of the first rolling type access code received from the first transmitter in the operator;
- receiving the first rolling type access code from the first transmitter by the learning transmitter, and storing a representation of the first rolling type access code;
- 20 - receiving, by the operator, a second rolling type access code from the learning transmitter within a predetermined period of time from receiving the first rolling type access code;
- comparing the second rolling type access code with the first rolling type access code saved in the operator;
- storing the representation of the second rolling type access code in the operator when the comparing step identifies that a predetermined relationship exists between the first rolling type access code and the second rolling type access code.
- 25 3. The method according to claim 2, wherein, during the first receiving step, after operator receives the first access code for moving the barrier^{1ub}, the operator further receives a signal from the first transmitter to stop the barrier on a mid-travel level, and this barrier position is being recorded as a starting point for learning process.
- 30 4. The method in accordance with claim 2, wherein each of the first rolling type access code and the second rolling type access code comprises a rolling code portion and at least one fixed identification portion.
- 35 5. The method in accordance with claim 4, wherein the first rolling type access code comprises a fixed identification portion recognized by the operator.

6. The method according to claim 5, wherein said predetermined relationship exists when the second rolling type access code comprises substantially the same fixed identification portion as the first rolling type access code, and the second rolling type access code is next in sequence to the first rolling code access code.

5

7. The method according to claim 6, wherein the fixed identification portion is a transmitter number identification portion.

8. The method according to claim 6, wherein the fixed identification portion is a transmitter type identification portion.

10

9. The method according to claim 2, wherein, prior to receiving a first transmitter access code by the operator, a barrier is closed while the first transmitter and the learning transmitter are placed between the barrier and the barrier movement operator.

15

10. The method according to claim 9, wherein, after receiving the first access code from the first transmitter to open the barrier, the operator further receives a signal from the first transmitter to stop the barrier on a mid-travel level, and this barrier position is being recorded as a starting point for a learning mode.

20

11. The method according to claim 10, wherein the second access code from the learning transmitter is being saved in the operator only if time between last operation of the barrier by the first transmitter and receipt of transmission from the learning transmitter by the operator is within some predetermined time limits.

25

12. A method for automatically learning a new transmitter rolling type access code by a barrier movement operator, comprising steps of:

- sending a first rolling type access code from a previously known transmitter to the operator;
- starting an operator auto learn mode by activating the operator in response to the first rolling type access code received by the operator and saving the first rolling type access code in the operator;
- storing a representation of the first rolling code in a learning transmitter;
- within a predetermined time limit receiving by operator a second rolling type access code derived by the learning transmitter from the stored representation of the first rolling type access code; and
- saving the second rolling type access code in the operator, when both the second rolling type access code and the first rolling type access code saved in the operator have a correlated fixed identification portion, said fixed identification portion being

30

35

recognizable by the operator, and the second rolling code is next in sequence to the first rolling code saved in the operator.

13. The method according to claim 12, wherein the second rolling type access code
5 further comprises a type identification portion identifying the learning transmitter.

14. The method according to claim 13, further comprising step of identifying, by operator, the second rolling type access code as coming from a learning transmitter.

15. The method according to claim 14, wherein the second transmitter access code
10 is saved in the operator when identified as an access code received from a learning type transmitter within some predetermined time limits.

16. The method according to claim 15, wherein, after receiving the first access
15 code from the previously known transmitter to move the barrier, the operator further receives a signal from the known transmitter to stop the barrier on a mid-travel level, and this barrier position is being recorded as a starting point for the auto learn mode.

17. A barrier movement operator system, comprising:
20 a receiver for receiving, learning and responding to transmitted rolling code type access codes;
at least one trained transmitter for operating the system by transmitting a rolling code type access code to the receiver, the rolling code including a fixed identification portion recognized by the system;
25 at least one learning transmitter for learning the rolling code type access code from said trained transmitter in order to operate the system;
a controller for evaluating relationship between a learning transmitter rolling type access code and a trained transmitter rolling type access code; and
30 a device for providing a barrier movement in response to access codes received by the receiver.

18. The operator system in accordance with claim 17, wherein the rolling type access code learned by the learning transmitter from the trained transmitter includes the fixed identification portion recognized by the system.

19. The operator system according to claim 18, wherein the fixed identification
35 portion of the rolling type access code is a trained transmitter number identification.

20. The operator system according to claim 19, wherein the fixed identification portion of the rolling type access code is a transmitter type identification.

21. The operator system according to claim 17, wherein the controller is
5 implemented using a programmable microcontroller.

22. The operator system according to claim 17, further including a timer to run time between last operation of the barrier by the trained transmitter and receipt of transmission from the learning transmitter by the system.

10

23. A method for modifying a rolling type operation code for a barrier movement operator, comprising steps of:

- receiving by the operator a first rolling type operation code from an original learning transmitter;
- 15 - saving the first rolling type operation code in the operator;
- modifying the first rolling type operation code by a learning transmitter;
- within a predetermined period of time from the first receiving step, receiving a modified rolling type operation code from the learning transmitter, the modified code having a predetermined relationship with the first code;
- 20 - storing the modified rolling type operation code in the operator.